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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,268	12/14/2001	Elisa M. Cross	57013US002	6070
32692	7590	05/03/2007		
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			EXAMINER KUMAR, SRILAKSHMI K	
			ART UNIT 2629	PAPER NUMBER
			NOTIFICATION DATE 05/03/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/017,268	Applicant(s) CROSS ET AL.	
	Examiner Srilakshmi K. Kumar	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43, 49 and 52-56 is/are pending in the application.
- 4a) Of the above claim(s) 19-43 and 49 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18, 52-56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The following office action is in response to Amendment filed on January 29, 2007. Claims 1-43, 49, and 52-56 are pending, with claims 19-43 withdrawn from consideration. Claims 44-48, 50 and 51 are cancelled. Claims 52-56 are newly added.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-7 and 15-18 are rejected under 35 U.S.C. 103(a) as being obvious over Matsuda et al (US 5,541,370) in view of Getz (US 6,627,918).

With reference to **claim 1**, Matsuda et al. teaches a method for making a touch activated user input device (Fig. 1, item 1A) comprising: providing a first substrate (15) comprising a first conductive coating (12, col.4, lines 37-40); inkjet printing a plurality of dots (13, col. 6, lines 66-col. 7, lines 3) on the first conductive coating (fig. 1); hardening the dots to form spacers adhered

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to the first substrate (13, col. 4, lines 54-59, col. 6, lines 66-col. 7, lines 3); and placing a second substrate (14) comprising a second conductive coating (11) over the first substrate such that the spacers maintain a distance between the first and second substrates (Fig. 1) to prevent detection of a touch location when no external force is applied and allow detection of a localized touch location when a sufficient localized external force is applied between the first and second substrates (Fig. 1, col. 4, lines 11-19, 65-col. 5, lines 7). Matsuda teaches wherein each of the dots comprise microparticles (col. 6, lines 66-67), but does not teach nanoparticles. Getz et al teach nanocomposite comprising nanoparticles in col. 2, line 65-col. 3, line 16. It would have been obvious to use nanoparticles as taught by Getz et al in Matsuda as the nanoparticles enable adjustment of the refractive index and reduced shrinkage of the dots (Getz et al, col. 3, lines 17-33).

With reference to **claims 2, 3 and 7**, Matsuda et al as modified by Getz et al teach nanocomposite comprising nanoparticles as disclosed in claim 1, above. Matsuda et al. teach that the dots are comprised of a composite comprising inorganic particles (resin, col. 6, lines 66-67), wherein the particles include silica particles and hexanediol diacrylate (col. 7, lines 44-65).

With reference to **claims 4 and 5**, Matsuda et al as modified by Getz et al teach nanocomposite comprising nanoparticles as disclosed in claim 1, above. Matsuda et al teaches wherein the particles are present in an amount of about 5%, or 10% to 40% by weight of the composite (col. 6, lines 36-44).

With reference to **claims 6 and 16**, Matsuda et al as modified by Getz et al teach nanocomposite comprising nanoparticles as disclosed in claim 1, above. Matsuda et al disclose wherein the particles have an average diameter in a range of about 10 to 30 nm and where they

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have heights of about 2 microns or more and have height to diameter aspect ratios of about 1:10 or more (col. 5, lines 8-22).

With reference to **claim 15**, Matsuda et al. teaches that the first and second conductive coatings each comprise a transparent conductive coating (col. 4, lines 1-51).

With reference to **claim 17**, Matsuda et al. teaches wherein the step of ink jet printing comprises ink jet printing a material onto a pre-existing dot (col. 5, lines 5-42).

With reference to **claim 18**, Matsuda et al. teaches that the user touch input device is used with an electronic display (col. 1, lines 7-15).

4. Claims 8-14, 52-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda et al in view of Getz et al as applied to claims 1-6, 15-18 above, and further in view of Sacripante et al (US 5,989,325).

With reference to **claim 52**, Matsuda et al. teaches a method for making a touch activated user input device (Fig. 1, item 1A) comprising: providing a first substrate (15) comprising a first conductive coating (12, col.4, lines 37-40); inkjet printing a plurality of dots (13, col. 6, lines 66-col. 7, lines 3) on the first conductive coating (fig. 1); hardening the dots to form spacers adhered to the first substrate (13, col. 4, lines 54-59, col. 6, lines 66-col. 7, lines 3); and placing a second substrate (14) comprising a second conductive coating (11) over the first substrate such that the spacers maintain a distance between the first and second substrates (Fig. 1) to prevent detection of a touch location when no external force is applied and allow detection of a localized touch location when a sufficient localized external force is applied between the first and second substrates (Fig. 1, col. 4, lines 11-19, 65-col. 5, lines 7). Matsuda teaches wherein each of the dots comprise microparticles (col. 6, lines 66-67), but does not teach nanoparticles. Getz et al

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teach nanocomposite comprising nanoparticles in col. 2, line 65-col. 3, line 16. It would have been obvious to use nanoparticles as taught by Getz et al in Matsuda as the nanoparticles enable adjustment of the refractive index and reduced shrinkage of the dots (Getz et al, col. 3, lines 17-33). Matsuda et al. and Getz et al fail to teach where the ink jet printing the plurality of dots by usage of a heated gel composition. Sacripante et al teach wherein the ink is a heated gel composition in col. 5, lines 54-60. It would have been obvious to one of ordinary skill in the art to include a gel composition as taught by Sacripante et al into Matsuda et al as modified by Getz et al as the gel composition enables hardening and prevents running (Sacripante et al, col. 4, lines 22-67).

With reference to **claims 8 and 9**, Matsuda et al. and Getz et al fail to teach where the ink jet printing the plurality of dots by usage of a heated gel composition. Sacripante et al teach wherein the ink is a heated gel composition in col. 5, lines 54-60. It would have been obvious to one of ordinary skill in the art to include a gel composition as taught by Sacripante et al into Matsuda et al as modified by Getz et al as the gel composition enables hardening and prevents running (Sacripante et al, col. 4, lines 22-67).

With reference to **claim 10, 52 and 53**, Matsuda et al as modified by Getz et al teach nanocomposite comprising nanoparticles as disclosed in claim 1, above. Matsuda et al. teaches that the dots are comprised of a composite comprising inorganic particles, wherein the particles include silica particles dispersed in an energy curable fluid vehicle (col. 6, lines 66-67).

With reference to **claim 11 and 56**, Matsuda et al. teach the usage of hexandiol diacrylate material (col. 7, lines 44-65)

With reference to **claims 12-14 and 55**, Matsuda et al as modified by Getz et al teach nanocomposite comprising nanoparticles as disclosed in claim 1, above. Matsuda et al teaches wherein the particles are present in an amount of about 5%, or 10% to 40% by weight of the composite (col. 6, lines 36-44). Matsuda et al disclose wherein the particles have an average diameter in a range of about 10 to 30 nm and where they have heights of about 2 microns or more and have height to diameter aspect ratios of about 1:10 or more (col. 5, lines 8-22).

Response to Arguments

5. Applicant's arguments with respect to claims 1-18 and 52-55 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srilakshmi K. Kumar whose telephone number is 571 272 7769. The examiner can normally be reached on 9:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on 571 272 3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Srilakshmi K Kumar
Examiner
Art Unit 2629

SKK
April 26, 2007


SUMATI LEFKOWITZ
SUPERVISORY PATENT EXAMINER